

ABSTRACT OF THE DISCLOSURE

In a timing component extractor for a digital modulated signal, a frequency converting section 30 receives a complex baseband signal having a symbol rate f_s and formed from an I signal and a Q signal, and converts frequency components $\pm f_s/2$, which 5 are present in the complex baseband signal as the data changes, to frequency components $\pm f_s/4$. The I signal and Q signal of the complex baseband signal are then nonlinearly processed. In other words, multipliers 31, 32 square the I signal and the Q signal, respectively, and an adder 33 adds the respective results of the multipliers 31, 32. A BPF 10 34 extracts the frequency components $\pm f_s/2$ from the output of the adder 33, and outputs the extracted frequency components $\pm f_s/2$ as a timing signal. Accordingly, processing can be conducted at a sampling frequency which is twice the symbol rate f_s . Moreover, timing extraction can be stably conducted without being affected by a carrier frequency offset.